Applicant: Timothy N. Jones, et al

Serial No.: 09/264,547 Filed : March 8, 1999

Page

Attorney's Docket No.: 09943-006001

- 75. (Amended) A computer-implemented method for use in creating a digital model of a tooth in a patient's dentition, the method comprising:
- [receiving] scanning the patient's dentition, or a physical model thereof, to (a) produce a three-dimensional (3D) data set representing the patient's dentition;
- applying a computer-implemented test to identify data elements that represent an (b) interproximal margin between two teeth in the dentition;
- applying another computer-implemented test to select data elements that lie on (c) one side of the interproximal margin for inclusion in the digital model;

wherein applying the computer-implemented test is carried out by a computer without human intervention.

- 98. (Amended) A computer-implemented method for use in creating a digital model of a tooth in a patient's dentition, the method comprising:
- [receiving] scanning the patient's dentition, or a physical model thereof, to (a) produce a 3D dataset representing at least a portion of the patient's dentition, including at least a portion of a tooth and gum tissue surrounding the tooth;
- applying a test to identify data elements lying on a gingival boundary that occurs (b) where the tooth and the gum tissue meet; and
- applying a test to the data elements lying on the boundary to identify other data (c) elements representing portions of the tooth;

wherein applying the computer-implemented tests is carried out by a computer without human intervention.

- 121. (Amended) A computer program, tangibly stored on a [tangible storage] computerreadable medium, for use in creating a digital model of an individual component of a patient's dentition, the program including executable instructions that, when executed by a computer, cause the computer to:
- [receiving] causing the patient's dentition, or a physical model thereof, to be scanned to produce a data set that forms a three-dimensional (3D) representation of the patient's dentition;

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Serial No.: 09/264,547 Filed: March 8, 1999

Page: 3

(b) apply a test to the data set to identify data elements that represent portions of an individual component of the patient's dentition; and

(c) create a digital model of the individual component based upon the identified data elements;

wherein the computer applies the test without human intervention.

- 147. (Amended) A computer program, <u>tangibly</u> stored on a [tangible storage] <u>computer-readable</u> medium, for use in creating a digital model of <u>a</u> tooth in a patient's dentition, the program including executable instructions that, when executed by a computer, cause the computer to:
- (a) [receiving] cause the patient's dentition, or a physical model thereof, to be scanned to produce a three-dimensional (3D) data set representing the patient's dentition;
- (b) apply a test to identify data elements that represent an interproximal margin between two teeth in the dentition;
- (c) apply another test to select data elements that lie on one side of the interproximal margin for inclusion in the digital model;

wherein the computer applies the test without human intervention.

- 170. (Amended) A computer program, <u>tangibly</u> stored on a [tangible storage] <u>computer-readable</u> medium, for use in creating a digital model of a tooth in a patient's dentition, the program including executable instructions that, when executed by a computer, cause the computer to:
- (a) [receiving] cause the patient's dentition, or a physical model thereof, to be scanned to produce a 3D data set representing at least a portion of the patient's dentition, including at least a portion of a tooth and gum tissue surrounding the tooth;
- (b) apply a test to identify data elements lying on a gingival boundary that occurs where the tooth and the gum tissue meet; and
- (c) apply a test to the data elements lying on the boundary to identify other data elements representing portions of the tooth;

wherein the computer applies the tests without human intervention.